

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A communication system for appointing a frequency assignment (FA) mode and/or a broadcast/multicast service (BCMCS) assignment ratio in a 1xEV-DO system in order to provide a BCMCS, the communication system comprising:

at least one access terminal (AT) for receiving a 1xEV-DO service or the BCMCS through the 1xEV-DO system;

a base station manager (BSM) for receiving BCMCS control information containing the FA mode and/or the BCMCS assignment ratio and transmitting a received BCMCS control information to a 1xEV-DO access network controller (ANC); and

an access network including a 1xEV-DO access network transceiver subsystem (ANTS) and the 1xEV-DO ANC for temporarily storing the received BCMCS control information and controlling a message being transmitted to said at least one access terminal, according to the FA mode and/or the BCMCS assignment ratio contained in the BCMCS control information;

wherein

the 1xEV-DO ANC is configured for assigning a specific 1xEV-DO FA, from among 1xEV-DO FAs available for the 1xEV-DO service, to the BCMCS according to each access network area in the 1xEV-DO system;

the FA mode includes a dedicated BCMCS mode where the specific 1xEV-DO FA is allocated exclusively for the BCMCS, and a mixed BCMCS mode where the specific 1xEV-DO FA is allocated to both the BCMCS and the 1xEV-DO service; and

in the mixed BCMCS mode, the 1xEV-DO ANC is configured for controlling a ratio of (i) a first portion of frequency capacity of the specific 1xEV-DO FA allocated to the BCMCS to (ii) a second portion of frequency capacity of the specific 1xEV-DO FA allocated to the 1xEV-DO in accordance with the BCMCS assignment ratio.

2-3. (canceled)

4. (Previously Presented) The communication system as claimed in claim 1, wherein the frequency capacity of the specific 1xEV-DO FA is allocated to the BCMCS and the 1xEV-DO service in accordance with the received BCMCS assignment ratio.

5. (original) The communication system as claimed in claim 1, wherein the FA mode and/or the BCMCS assignment ratio is contained in a system parameter message for the BCMCS in the 1xEV-DO system and then transmitted.

6. (original) The communication system as claimed in claim 1, wherein the base station manager stores a BCMCS control program performing a function of inputting the BCMCS control information, determining whether the inputted BCMCS control information is correct information or not, inserting the BCMCS control information into the system parameter message, and transmitting the system parameter message to the access network.

7. (original) The communication system as claimed in claim 1, wherein the access network includes a base station controller (BSC) and a base station transceiver subsystem (BTS).

8. (original) The communication system as claimed in claim 1, wherein the 1xEV-DO system further comprises a general ATM switch network (GAN), which is connected to

the 1xEV-DO access network controller and performs a routing function for transmitted/received packet data regarding the 1xEV-DO service and/or the BCMCS.

9. (Previously Presented) The communication system as claimed in claim 1, wherein the 1xEV-DO system further comprises a packet data serving node (PDSN), which is connected to the GAN and performs a function of transmitting the packet data to said at least one access terminal through the GAN.

10. (original) The communication system as claimed in claim 1, wherein the 1xEV-DO system further comprises an authorization authentication accounting (AAA), which is connected to the GAN and the packet data serving node and performs a subscriber authentication when an authenticated access terminal requests a packet data service, encodes the packet data by means of an encoding key in order to transmit the packet data through the packet data serving node, and collects accounting data.

11. (Previously Presented) The communication system as claimed in claim 1, wherein the 1xEV-DO system further comprises a data location register, which is connected to the 1xEV-DO access network controller through the GAN by means of a transmission control protocol/Internet protocol (TCP/IP) and manages position information and paging zone of said at least one access terminal, supports mobility of at least one access terminal, and controls a session.

12. (Previously Presented) The communication system as claimed in claim 10, wherein the 1xEV-DO system further comprises a BCMCS controller for providing and managing session information of said at least one access terminal, receiving subscriber profile information from the authorization authentication accounting, and assigning service authority to said at least one access terminal.

13. (original) The communication system as claimed in claim 12, wherein the 1xEV-DO system further comprises a BCMCS contents server for receiving at least one BCMCS contents from at least one BCMCS contents provider, encoding the received BCMCS contents, and storing the encoded BCMCS contents.

14. (original) The communication system as claimed in claim 13, wherein the BCMCS contents server converts the encoded BCMCS contents into an IP-based multicast stream and transmits the IP-based multicast stream to the packet data serving node by means of a multicast transmission technology.

15. (original) The communication system as claimed in claim 13, wherein the 1xEV-DO system further comprises at least one BCMCS contents providing server for transmitting the BCMCS contents to the BCMCS contents server by means of a bearer service.

16-41. (Canceled)

42. (Previously Presented) A method of controlling a broadcast/multicast service (BCMCS) in a 1xEV-DO system including a plurality of access terminals (ATs), an access network (AN) and a base station manager (BSM), the access network including (i) a 1xEV-DO access network transceiver subsystem (ANTS) for transmitting packet data and various messages in order to simultaneously provide both a 1xEV-DO service and the BCMCS to one or more of said access terminals, and (ii) a 1xEV-DO access network controller (ANC), the method comprising the following steps performed by the 1xEV-DO ANC:

receiving mixed BCMCS mode information and BCMCS assignment ratio information from the BSM and storing the received information,

based on the mixed BCMCS mode information, allocating frequency capacity of a specific 1xEV-DO FA to both the BCMCS and the 1xEV-DO service; and

controlling a 1xEV-DO service of messages, which include both the 1xEV-DO service and the BCMCS and are communicated over the specific 1xEV-DO FA, according to a 1xEV-DO message appointment ratio defined by the BCMCS assignment ratio information, wherein said controlling comprises:

periodically determining whether or not the 1xEV-DO service of a message communicated over said specific 1xEV-DO FA exceeds the 1xEV-DO message appointment ratio; and

if the 1xEV-DO service of the message exceeds the 1xEV-DO message appointment ratio:

selecting at least one access terminal, which receives the 1xEV-DO service when the 1xEV-DO service of the message exceeds the 1xEV-DO message appointment ratio, as a shift-targeted access terminal;

assigning another 1xEV-DO FA to said shift-targeted access terminal; and

providing the 1xEV-DO service on said another 1xEV-DO FA to said at least one shift-targeted access terminal, thereby maintaining the 1xEV-DO service of messages communicated over said specific 1xEV-DO FA at or below the 1xEV-DO message appointment ratio.

43. (previously presented) The method as claimed in claim 42, wherein the BCMCS assignment ratio information contains ratio information for using a BCMCS FA resource, which is appointed for the BCMCS, in the BCMCS mixed mode.

44. (previously presented) The method as claimed in claim 43, wherein the 1xEV-DO message appointment ratio and the BCMCS assignment ratio together define from the entire BCMCS FA resource.

45. (Previously Presented) The method as claimed in claim 42, wherein the information on said another 1xEV-DO FA is recorded in a redirection message or a traffic channel assignment message and then transmitted to said at least one shift-targeted access terminal.

46. (Previously Presented) The method as claimed in claim 45, wherein said at least one shift-targeted access terminal having received the redirection message or the traffic channel assignment message shifts to said another 1xEV-DO FA and receives the 1xEV-DO service over said another 1xEV-DO FA instead of said specific 1xEV-DO FA.